# Warranty Card
# Terms of Warranty

To your energizer

# Granit GA4500

we issue warranty for a period of

## 3 years

at following conditions:
We issue warranty to your energizer **GA4500** for a period of 3 years from date of selling at following conditions:

The selling date has to be proved by this certificate of guarantee, which has to be accurately completed by your dealer.

All deficiencies or damages during this period that can be traced back to faults of material or faults of fabrication, will be repaired costless, when the device is returned to us prepaid.

This warranty cannot be issued when the device is being connected to wrong power supply or when it was damaged due to an Act of God (e. g. lightning stroke or water damage). It also cannot be issued in any case of unauthorized intervention or maloperation.

Device: **Battery Energizer Granit GA4500**

Selling date: Serial number:

Dealer stamp/signature of dealer:

To execute repair works please contact your local GRANIT dealer:

GRANIT
QUALITY PARTS

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# User manual (english version) CE

# Battery Energizer GA4500

Best. Nr.: 580580106

**Packing unit:**
1 battery energizer GA4500
1 set fence and grounding cable
1 warning plate
1 user manual and warranty card

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QUALITY PARTS

## Mounting

Mount the energizer **Granit GA4500** upright at a wooden rod, at a wall or in an appropriate housing or case. Protect the energizer from water.

Hit two grounding rods deeply into the ground at a humid place directly nearby your fence, having a distance of 3 feet to each other. Connect the two grounding rods with an appropriate earthing cable and connect them also to the ground connector of the energizer. For connections always use corrosion-resistant grounding cable. **Note that the most performance and output power of your energizer can only be achieved by best grounding and fence isolation conditions.**

Connect your fence and the fence connector of your energizer using the red fencing cable. Connect the energizer to the 12V battery in the right connection order of the battery clamps (red clamp +, black clamp -). Now the green battery control LED in the energizer should light constantly and the energizer should start working.

## Using the battery, deep-discharging protection

The energizer **GA4500** protects the battery with an in-built deep-discharging protection. If the battery voltage sinks below 10,8V the deep-discharging protection turns off the energizer and the green battery control LED blinks. Please note:

- 12V lead-acid-batteries must be charged approx. every 6 months, even when they are not in use.
- If the green battery control LED does not light constantly after connecting the energizer to the battery probably the battery is not charged well or the battery is not suitable for the energizer.
- When the green battery control LED starts flashing during normal operation of the energizer the battery has to be charged.
- Keep the battery terminals clean and grease them lightly with battery grease.
- The most performance and output power of your energizer is achieved by proper grounding conditions.

## Connectors, fence control and energizer control

The energizer **GA4500** has two fence connectors.

- **Fence connector 1 (strong)** puts out maximum impulse energy. It is used for long fences and non-sensitive animals.
- **Fence connector 2 (reduced power output)** puts out half the impulse energy of fence connector 1. It is used for shorter fences and sensitive animals.
- Both fence connector 1 and 2 can be used at the same time and independant to each other. Note that if one fence connector is shorted to ground then this can affect the power output of the other fence connector in negative way.

The energizer **GA4500** has both an integrated fence control and an energizer control.

- The red energizer control LED flashes shortly with each energy impulse and shows correct working of the energizer and good fence isolation. If the energy driven into the fence is being transferred into ground (e. g. by animal touching or by plants touching the fence or by fouling) the red energizer control LED is lit for a longer period while flashing.
- The fence control bar indicates the voltage at the fence connector 1 by each fence impulse. If the control bar flashes completely green then voltage at fence connector 1 is above 5000 volts. The last yellow bar flashes at approx. 4000V and when the voltage sinks below 2000 volts then no bar will flash. In this case you will not be able to herd animals any more due to the low output voltage of the electric fence.

  If you notice changes in the amplitude of the fence control bar then changes in the fencing conditions or bad isolators could be a reason.

## Ground test connector

- The ground test connector is designed to control the grounding conditions permanently. Use a separate groundig rod, hit it into the ground separated 3 to 6 feet away from the normal grounding rods. When the yellow grounding control LED flashes then grounding conditions are normally suitable.

## Safety informations

Not following the safety instructions and an incorrect energizer setup could lead to hazard and may cause technical malfunction of the energizer. Please observe strictly following items:

- Connect your energizer **GA4500** only to a 12V battery
- Always use proper fencing material when using flexible fencing wire. Wire of low quality is not recommended.
- Your energizer **GA4500** cannot be used for herding sensitive animals.
- Build up your fence solidly. Avoid your animals from getting tangled in your electric fence. Check the condition of your fence and your energizer daily.
- Check the condition of your 12V battery daily and charge it if required. Avoid deep-discharging! Consider that a 12V lead-acid battery discharges slowly by itself even if it is not used.

## Power-saving

The energizer **GA4500** is also fitted with an in-built power-saving circuitry: connected to a good fence (without faults and without arc-overs) and to a good grounding the power consumption is being reduced to a minimum. The more impulse energy is transferred into ground by bad fence isolation, animals touching or fouling, more power is taken out of the battery by the energizer. Below is shown how long a battery could operate the energizer depending on the fence conditions.

| capacity | min. operating time | max. operating time |
|---|---|---|
| 36Ah | 3 days | 20 days |
| 44Ah | 4 days | 28 days |
| 88Ah | 7 days | 50 days |